A1

engine (not shown). The seat 250 includes a sealing surface 252 surrounding the opening. The sealing surface, which faces the interior of the valve body 240, can be frustoconical or concave in shape, and can have a finished surface. An orifice disk can be used in connection with the seat 250 to provide at least one precisely sized and oriented orifice in order to obtain a particular fuel spray pattern.--

The paragraph starting at page 4, line 13, has been replaced with the following paragraph:

A2

--Fuel flow through the armature assembly 260 can be provided by at least one axially extending through-bore 267 and at least one apertures 268 through a wall of the armature assembly 260. The apertures 268, which can be of any shape, preferably are axially elongated, as shown by elongated openings, to facilitate the passage of gas bubbles. For example, in the case of a separate intermediate portion 266 that is formed by rolling a sheet substantially into a tube, the apertures 268 can be an axially extending slit defined between non-abutting edges of the rolled sheet. However, the apertures 268, in addition to the slit, would preferably include openings extending through the sheet. The apertures 268 provide fluid communication between the at least one through-bore 267 and the interior of the valve body 240. Thus, in the open configuration, fuel can be communicated from the through-bore 267, through the apertures 268 and the interior of the valve body 240, around the closure member 264, and through the opening into the engine (not shown).--

The paragraph starting at page 5, line 20, has been replaced with the following paragraph:

A3

--The valve group subassembly 200 can be assembled as follows. The non-magnetic shell 230 is connected to the inlet tube 210 and to the valve body 240. The adjusting tube 281 is inserted along the axis A-A from the first inlet tube end of the inlet tube 210. Next, the resilient member 270 and the armature assembly 260 (which was previously assembled) are inserted along the axis A-A from the second valve body end of the valve body 240. The adjusting tube 281 can be inserted into the inlet tube 210 to a predetermined distance so as to abut the resilient member 270. The position of the adjusting tube 281 with respect to the inlet tube 210 can be used to adjust the dynamic properties of the resilient member 270, e.g., so as to ensure that the

armature assembly 260 does not float or bounce during injection pulses. The seat 250 and orifice disk are then inserted along the axis A-A from the second valve body end of the valve body 240. The seat 250 and orifice disk can be fixedly attached to one another or to the valve body 240 by known attachment techniques such as laser welding, crimping, friction welding, conventional welding, etc.--

A3

The paragraph starting at page 8, line 11, has been replaced with the following paragraph:

--In operation, the electromagnetic coil 310 is energized, thereby generating magnetic flux in the magnetic circuit. The magnetic flux moves armature assembly 260 (along the axis A-A, according to a preferred embodiment) towards the integral pole piece 220, i.e., closing the working air gap. This movement of the armature assembly 260 separates the closure member 264 from the seat 250 and allows fuel to flow from the fuel rail (not shown), through the inlet tube 210, the through-bore 267, the apertures 268 and the valve body 240, between the seat 250 and the closure member 264, through the opening, and finally through the orifice disk into the internal combustion engine (not shown). When the electromagnetic coil 310 is de-energized, the armature assembly 260 is moved by the bias of the resilient member 270 to contiguously engage the closure member 264 with the seat 250, and thereby prevent fuel flow through the injector 100.--

A4

The paragraph starting at page 12, line 9, has been replaced with the following paragraph:

--The inserting of the fuel group subassembly 200 into the power group subassembly 300 operation can involve setting the relative rotational orientation of fuel group subassembly 200 with respect to the power group subassembly 300. According to the preferred embodiments, the fuel group can be rotated such that the included angle between a reference point on the orifice plate and a reference point on the injector harness connector 321 is within a predetermined angle. The relative orientation can be set using robotic cameras or computerized imaging devices to look at respective predetermined reference points on the subassemblies, orientating the subassemblies and then checking with another look and so on until the subassemblies are properly orientated before the subassemblies are inserted together.--

A5

The paragraph starting at page 13, line 3, has been replaced with the following paragraph:

A6

--The method of assembly of the preferred embodiments, and the preferred embodiments themselves, are believed to provide manufacturing advantages and benefits. For example, because of the modular arrangement only the valve group subassembly is required to be assembled in a "clean" room environment. The power group subassembly 300 can be separately assembled outside such an environment, thereby reducing manufacturing costs. Also, the modularity of the subassemblies permits separate pre-assembly testing of the valve and the coil assemblies. Since only those individual subassemblies that test unacceptable are discarded, as opposed to discarding fully assembled injectors, manufacturing costs are reduced. Further, the use of universal components (e.g., the coil/bobbin unit, non-magnetic shell 230, seat 250, closure member 264, filter/retainer assembly 282, etc.) enables inventory costs to be reduced and permits a "just-in-time" assembly of application specific injectors. Only those components that need to vary for a particular application, e.g., the terminal 320 and inlet tube 210 need to be separately stocked. Another advantage is that by locating the working air gap, i.e., between the armature assembly 260 and the pole piece 220, within the electromagnetic coil, the number of windings can be reduced. In addition to cost savings in the amount of wire 312 that is used, less energy is required to produce the required magnetic flux and less heat builds-up in the coil (this heat must be dissipated to ensure consistent operation of the injector). Yet another advantage is that the modular construction enables the orifice disk to be attached at a later stage in the assembly process, even as the final step of the assembly process. This just-in-time assembly of the orifice disk allows the selection of extended valve bodies depending on the operating requirement. Further advantages of the modular assembly include out-sourcing construction of the power group subassembly 300, which does not need to occur in a clean room environment. And even if the power group subassembly 300 is not out-sourced, the cost of providing additional clean room space is reduced.--